


**Listing of Claims:**

Claims 1-55 cancelled.

56. (Presently Amended) A method for synthesizing a polymer array on a substrate comprising the steps of:

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- a) ~~forming~~ providing a surface having one or more synthesis intermediates bound thereon, the synthesis ~~groups~~ intermediates having a reactive group protected from reaction by a photosensitive protecting group;
  - b) coating said surface with a substance comprising a photobleachable compound ~~or group~~
  - c) irradiating at least a part of said surface to:
    - i) bleach said photobleachable compound; and
    - ii) remove said protective group;
  - d) removing said substance from said surface;
  - e) reacting a subsequently added synthesis intermediate with the unprotected reactive group, the subsequently added synthesis intermediate having a reactive group protected from reaction by a protective group;
  - f) recoating said surface with a substance comprising a photobleachable compound ~~or group~~ if another synthesis intermediate is to be added; and
  - g) repeating steps b) through f) or not, until a the desired polymer array ~~sequence~~ is obtained.

Claims 57-59 are cancelled.

60. (Presently Amended) The methods of claims 56 ~~and 57~~ wherein said synthesis intermediate is a nucleotide.

61. (Withdrawn) The methods of claims 56 and 57 wherein said synthesis intermediate is a polynucleotide.

62. (Withdrawn) The methods of claims 56 and 57 wherein said synthesis intermediate is an amino acid.

Claim 63 is cancelled.

64. (Presently Amended) The methods of claims 56 and ~~57~~ wherein said photobleachable compound is a photobleachable dye.

65. The method of claim 64 wherein said photobleachable dye is pyrylium dye or diazonium dye.

Claims 66-79 are cancelled.

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